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EXAMINER

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

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inskeepstaff@inskeeplaw.com

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3, 5-14, 48-57 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuang- US Patent # 6,601,440. As to claim 1 and 50, Chuang discloses an apparatus for detecting saturation in soil including a probe body (housing 1 with lower section 11 with integrated drill 12 for insertion into the ground) with an interior and exterior, a sensor member/component mast (sensor unit 2 for sensing soil saturation) which appears to be removably fit within the body given the recitation in col. 4, lines 15-20 which indicates a guide 15 "is positioned in housing 1" and that "sensor unit 2 includes a reed switch received in guide" suggesting the removable fit or user insertion of sensor unit 2 along with guide 15, and wireless transmitter 32, see figs. 2-5 and col. 4, lines 1 et seq. Further, it is noted that a top member is not described. However, from the fig. 2 illustration, there is clearly a top member housing the control unit 3 and is fitted with threads allowing for selective enclosure. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have designated the cover of the control unit 3 as a top member since it is on the top of housing and has threading suggesting that it is removable as well. As to claim 6, note the top portion of housing 1 upon which the top member is secured can

be designated as a "collar". As to claims 3 and 5, Chuang lacks a teaching for a gasket. However, the usage of a gasket for sealing between threaded members is old and well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included a gasket between the threading around the guide of the sensor 2 or between the threading of the control unit 3 cover in order to protect the electronics from the moisture of the soil surrounding the unit. As to claims 7 and 57, note battery 31. As to claim 8, note transceiver (wireless transmitter 32). As to claims 9 and 56, there appears to be a screw mount given the fig. 2 depiction. As to claims 10 and 59, usage of a solar panel as a power supply is old and well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a solar panel as the power supply in Chuang in order to eliminate the need for an electronic battery. As to claim 13, the shape is round. As to claim 14, note filter 14 protruding out. As to claim 48, note guide 15. As to claims 49 and 55, the sensor is a moisture sensor, see abstract. As to claim 50, note rejection above with regard to claim 1 and component mast 15. As to claim 51, note fig. 2 depiction. As to claim 52, note the reed switch 20, fins 23 comprising the plurality of components. As to claims 53 and 54, again note fig. 2 depicting these components along a length and perimeter of the body.

3. Claims 1, 3, 5-14, and 48-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buss et al-US Patent # 7,240,743 in view of Chuang-US

Patent # 6,601,440. As to claims 1, 8 and 50, Buss et al disclose a soil probe insertion arrangement used in the prior art including probe body 10 for placement in the ground via conical end 16 and having an interior for insertion of sensor member/component mast (sensor array 18) which uses capacitive sensors for measuring soil properties, top member (cover 14) which must be removable in order to allow for the recited insertion of the sensor array, see fig. 1 and col. 3, lines 46 et seq. Further, it is noted that Buss et al does not specifically recite that the probe wirelessly transmits data. However, in a related prior art device, Chuang discloses an apparatus for detecting soil properties which includes a wireless transmitter 32/transceiver within the housing 1 of the probe, see fig. 2. Inclusion of a wireless transmitter in the Buss et al device would have been obvious to one of ordinary skill in the art at the time of the invention in order to remotely monitor the conditions of the soil. As to claims 3 and 5, usage of a gasket is not illustrated. However, usage of a gasket for sealing is old and well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included a gasket on the sensor array 18 in order to seal off the electronics depicted in the sensor array from the external soil elements. As to claim 6, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a collar at the head end of the probe body in order to mount the cover. As to claim 7 and 57, usage of a battery is not disclosed in Buss et al. However, in the Chuang device the battery/power supply

31 is depicted within the probe body, see fig. 2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included a battery or power supply in the Buss et al device in order to have an in situ power source to supply power to the electronic sensors. As to claims 10 and 59, further usage of a solar panel as a power supply is old and well-known.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a solar panel as the power supply in Chuang in order to eliminate the need for an electronic battery. As to claims 9 and 56, the type of mounting is not clear in the Buss et al reference. However, given the Chuang depiction of threading, it would have been obvious to one of ordinary skill in the art at the time of the invention to have included a screw mount in order to secure the cover to the probe body. As to claims 11 and 58, fig. 1 appears to have some display on the cover 14 indicated by the boxes. As to claim 12, usage of an LCD/LED display is old and very well-known. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have provided an LCD/LED display on the probe of Buss et al. As to claim 13, Buss et al indicate that the probe is round/cylindrical. As to claim 14, note the protruding sensor rings on array 18. As to claim 48, the sensor array 18 appears to be in the form of a mast. As to claims 49 and 55, the sensors are recited as soil conductive, see col. 2, lines 26 et seq. As to claim 51, given the depiction of fig. 1, it would appear that the sensor array mast connects to the top. As to claim

52, note the plurality of components since it is a sensor array. As to claims 53 and 54, when positioned in the probe body 10, it would appear that the components are positioned along a length and perimeter.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3, 5-14, and 48-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It still is not clear how item 760 is a sensor as in fig. 7. Also, as in claim 5, how does the sensor member have a gasket. Rather, from the disclosure, it would appear that the gasket is on the probe body.

Response to Arguments

6. Applicant's arguments filed 9/8/08 have been fully considered but they are not persuasive. Applicant has argued that the Chuang reference has non removable internal components and that the sensor member is clear given par[0083-0088]. Such arguments are not found persuasive because as indicated above Chuang does indicate that the guide 15 with the sensor *is positioned* in the housing and applicant has still not explained the illustration of fig. 7 depicting the sensor 760 or explained how the gasket is on the sensor member. It is not

argued that the gasket is depicted on the probe body. In fig. 9 there is no gasket on the *sensor mast* depicted.

7. Applicant's arguments with respect to claims 1, 3, 5-14, and 48-59 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nashmiya S. Fayyaz whose telephone

number is 571-272-2192. The examiner can normally be reached on Tuesdays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. S. F./

Examiner, Art Unit 2856

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856